RAW SEQUENCE LISTING   DATE: 08/16/2001
PATENT APPLICATION: US/09/817,913   TIME: 13:08:27

Input Set : A:\106101-145.ST25.txt
Output Set: N:\CRF3\08162001\I817913.raw

ENTERED

ENTERED

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 5 <110> APPLICANT: Li, Zuomei
 6         Bonfils, Claire
 7         Besterman, Jeffrey
 9 <120> TITLE OF INVENTION: Inhibition of Specific Histone Deacetylase Isoforms
11 <130> FILE REFERENCE: 106101.145
13 <140> CURRENT APPLICATION NUMBER: US 09/817,913
14 <141> CURRENT FILING DATE: 2001-03-26
16 <150> PRIOR APPLICATION NUMBER: US 60/192,157
17 <151> PRIOR FILING DATE: 2000-03-24
19 <160> NUMBER OF SEQ ID NOS: 33
21 <170> SOFTWARE: PatentIn version 3.1
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24 <211> LENGTH: 481
25 <212> TYPE: PRT
26 <213> ORGANISM: Human
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38 His Arg Ile Arg Met Thr His Asn Leu Leu Leu Asn Tyr Gly Leu Tyr
39          35                  40                  45
42 Arg Lys Met Glu Ile Tyr Arg Pro His Lys Ala Asn Ala Glu Glu Met
43      50                  55                  60
46 Thr Lys Tyr His Ser Asp Asp Tyr Ile Lys Phe Leu Arg Ser Ile Arg
47 65                  70                  75                  80
50 Pro Asp Asn Met Ser Glu Tyr Ser Lys Gln Met Gln Arg Phe Asn Val
51              85                  90                  95
54 Gly Glu Asp Cys Pro Val Phe Asp Gly Leu Phe Glu Phe Cys Gln Leu
55              100                 105                 110
58 Ser Thr Gly Gly Ser Val Ala Ser Ala Val Lys Leu Asn Lys Gln Gln
59          115                 120                 125
62 Thr Asp Ile Ala Val Asn Trp Ala Gly Gly Leu His His Ala Lys Lys
63      130                 135                 140
66 Ser Glu Ala Ser Gly Phe Cys Tyr Val Asn Asp Ile Val Leu Ala Ile
67 145                 150                 155                 160
70 Leu Glu Leu Leu Lys Tyr His Gln Arg Val Leu Tyr Ile Asp Ile Asp
71              165                 170                 175
74 Ile His His Gly Asp Gly Val Glu Glu Ala Phe Tyr Thr Thr Asp Arg
75              180                 185                 190
78 Val Met Thr Val Ser Phe His Lys Tyr Gly Glu Tyr Phe Pro Gly Thr
79          195                 200                 205
82 Gly Asp Leu Arg Asp Ile Gly Ala Gly Lys Gly Lys Tyr Tyr Ala Val
83      210                 215                 220
86 Tyr Pro Leu Arg Asp Gly Ile Asp Asp Glu Ser Tyr Glu Ala Ile Phe
87 225                 230                 235                 240
90 Lys Pro Val Met Ser Lys Val Met Glu Met Phe Gln Pro Ser Ala Val
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Input Set : A:\106101-145.ST25.txt
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 94 Val Leu Gln Cys Gly Ser Asp Ser Leu Ser Gly Asp Arg Leu Gly Cys
 95            260                265                270
 98 Phe Asn Leu Thr Ile Lys Gly His Ala Lys Cys Val Glu Phe Val Lys
 99        275                280                285
102 Ser Phe Asn Leu Pro Met Leu Met Leu Gly Gly Gly Gly Tyr Thr Ile
103      290                295                300
106 Arg Asn Val Ala Arg Cys Trp Thr Tyr Glu Thr Ala Val Ala Leu Asp
107 305                310                315                320
110 Thr Glu Ile Pro Asn Glu Leu Pro Tyr Asn Asp Tyr Phe Glu Tyr Phe
111                325                330                335
114 Gly Pro Asp Phe Lys Leu His Ile Ser Pro Ser Asn Met Thr Asn Gln
115            340                345                350
118 Asn Thr Asn Glu Tyr Leu Glu Lys Ile Lys Gln Arg Leu Phe Glu Asn
119        355                360                365
122 Leu Arg Met Leu Pro His Ala Pro Gly Val Gln Met Gln Ala Ile Pro
123    370                375                380
126 Glu Asp Ala Ile Pro Glu Glu Ser Gly Asp Glu Asp Glu Asp Asp Pro
127 385                390                395                400
130 Asp Lys Arg Ile Ser Ile Cys Ser Ser Asp Lys Arg Ile Ala Cys Glu
131            405                410                415
134 Glu Glu Phe Ser Asp Ser Glu Glu Glu Gly Glu Gly Gly Arg Lys Asn
135            420                425                430
138 Ser Ser Asn Phe Lys Lys Ala Lys Arg Val Lys Thr Glu Asp Glu Lys
139        435                440                445
142 Glu Lys Asp Pro Glu Glu Lys Lys Glu Val Thr Glu Glu Glu Lys Thr
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157 <212> TYPE: DNA
158 <213> ORGANISM: Human
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165 cgcagggcac ccggaggaaa gtctgttact actacgacgg ggatgttgga aattactatt     180
167 atggacaagg ccacccaatg aagcctcacc gaatccgcat gactcataat ttgctgctca     240
169 actatggtct ctaccgaaaa atggaaatct atcgccctca caaagccaat gctgaggaga     300
171 tgaccaagta ccacagcgat gactacatta aattcttgcg ctccatccgt ccagataaca     360
173 tgtcggagta cagcaagcag atgcagagat caacgttggg tgaggactgt ccagtattcg     420
175 atggcctgtt tgagttctgt cagttgtcta ctggtggttc tgtggcaagt gctgtgaaac     480
177 ttaataagca gcagacggac atcgccgtga attgggctgg gggcctgcac catgcaaaga     540
179 agtccgaggc atctggcttc tgttacgtca atgatatcgt cttggccatc ctggaactgc     600
181 taaagtatca ccagagggtg ctgtacattg acattgatat tcaccatggt gacggcgtgg     660
183 aagaggcctt ctacaccacg gaccgggtca tgactgtgtc ctttcataag tatggagagt     720
185 acttcccagg aactggggac ctacgggata ccggggctgg caaagacaag tattatgctg     780
187 ttaactaccc gctccgagac gggattgatg acgagtccta tgaggccatt ttcaagccgg     840
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RAW SEQUENCE LISTING　　　　　　　　　DATE: 08/16/2001
PATENT APPLICATION:　US/09/817,913　　　TIME: 13:08:27

Input Set : A:\106101-145.ST25.txt
Output Set: N:\CRF3\08162001\I817913.raw

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193 gtgtggaatt tgtcaagagc tttaacctgc ctatgctgat gctgggaggc ggtggttaca 1020
195 ccattcgtaa cgttgcccgg tgctggacat atgagacagc tgtggccctg gatacggaga 1080
197 tccctaatga gcttccatac aatgactact ttgaatactt tggaccagat ttcaagctcc 1140
199 acatcagtcc ttccaatatg actaaccaga acacgaatga gtacctggag aagatcaaac 1200
201 agcgactgtt tgagaacctt agaatgctgc cgcacgcacc tggggtccaa acgcaggcga 1260
203 ttcctgagga cgccatccct gaggagagtg gcgatgagga cgaagacgac cctgacaagc 1320
205 gcatctcgat ctgctcctct gacaaacgaa ttgcctgtga ggaagagttc tccgattctg 1380
207 aagaggaggg agaggggggc cgcaagaact cttccaactt caaaaaagcc aagagagtca 1440
209 aaacagagga tgaaaaagag aaagacccag aggagaagaa aggaatcacc gaagaggaga 1500
211 aaaccaagga ggagaagcca gaagccaaag gggtcaagga ggaggccaag ttggcctgaa 1560
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218 <211> LENGTH: 489
219 <212> TYPE: PRT
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229             20                  25                  30
232 Met Lys Pro His Arg Ile Arg Met Thr His Asn Leu Leu Leu Asn Tyr
233         35                  40                  45
236 Gly Leu Tyr Arg Lys Met Glu Ile Tyr Arg Pro His Lys Ala Thr Ala
237     50                  55                  60
240 Glu Glu Met Thr Lys Tyr His Ser Asp Glu Tyr Ile Lys Phe Leu Arg
241 65                  70                  75                  80
244 Ser Ile Arg Pro Asp Asn Met Ser Glu Tyr Ser Lys Gln Met His Ile
245                 85                  90                  95
248 Pro Phe Asn Val Gly Glu Asp Cys Pro Ala Phe Asp Gly Leu Phe Glu
249             100                 105                 110
252 Phe Cys Gln Leu Ser Thr Gly Gly Ser Val Ala Gly Ala Val Lys Leu
253         115                 120                 125
256 Asn Arg Gln Gln Thr Asp Met Ala Val Asn Trp Ala Gly Gly Leu His
257     130                 135                 140
260 His Ala Lys Lys Tyr Glu Ala Ser Gly Phe Cys Tyr Val Asn Asp Ile
261 145                 150                 155                 160
264 Val Leu Ala Ile Leu Glu Leu Leu Lys Tyr His Gln Arg Val Leu Tyr
265                 165                 170                 175
268 Ile Asp Ile Asp Ile His His Arg Gly Asp Gly Val Glu Glu Ala Phe
269             180                 185                 190
272 Tyr Thr Thr Asp Arg Val Met Thr Val Ser Phe Tyr Gly Glu Tyr Phe
273         195                 200                 205
276 Pro Gly Thr Gly Asp Leu Arg Asp Ile Gly Ala Gly Lys Gly Lys Tyr
277     210                 215                 220
280 Tyr Ala Val Asn Phe Pro Met Cys Asp Gly Ile Asp Asp Glu Ser Tyr
281 225                 230                 235                 240
284 Gly Gln Ile Phe Lys Pro Ile Ile Ser Lys Val Met Glu Met Tyr Gln
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RAW SEQUENCE LISTING   DATE: 08/16/2001
PATENT APPLICATION: US/09/817,913   TIME: 13:08:27

Input Set : A:\106101-145.ST25.txt
Output Set: N:\CRF3\08162001\I817913.raw

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285                  245            250              255
288 Pro Ser Ala Val Val Leu Gln Cys Gly Ala Asp Ser Leu Ser Gly Asp
289              260             265           270
292 Arg Leu Gly Cys Phe Asn Leu Thr Val Lys Gly His Ala Lys Cys Val
293          275             280           285
296 Glu Val Val Lys Thr Phe Asn Leu Pro Leu Leu Met Leu Gly Gly Gly
297      290              295               300
300 Gly Tyr Thr Ile Leu Arg Asn Val Ala Arg Cys Trp Thr Tyr Glu Thr
301 305                 310             315               320
304 Ala Val Ala Leu Asp Cys Glu Ile Pro Asn Glu Leu Pro Tyr Asn Asp
305              325             330             335
308 Tyr Phe Glu Tyr Phe Gly Pro Asp Phe Lys Leu His Ile Ser Pro Ser
309          340             345           350
312 Asn Met Thr Asn Gln Asn Thr Pro Glu Tyr Met Glu Lys Ile Lys Gln
313          355             360           365
316 Arg Leu Phe Glu Asn Leu Arg Met Leu Pro His Ala Pro Gly Val Gln
317      370             375             380
320 Met Gln Ala Ile Pro Glu Asp Ala Val His Glu Asp Ser Gly Asp Glu
321 385              390             395               400
324 Asp Gly Glu Asp Pro Asp Lys Arg Ile Ser Ile Arg Ala Ser Asp Lys
325              405             410               415
328 Arg Ile Ala Cys Asp Glu Glu Phe Ser Asp Ser Glu Asp Glu Gly Glu
329          420             425             430
332 Gly Gly Arg Asn Val Ala Asp His Lys Lys Gly Ala Lys Ala Arg Ile
333          435             440             445
336 Glu Glu Asp Lys Lys Glu Thr Glu Asp Lys Lys Thr Asp Val Lys Glu
337      450             455             460
340 Glu Asp Lys Ser Lys Asp Asn Ser Gly Glu Lys Thr Asp Thr Lys Gly
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351 <212> TYPE: DNA
352 <213> ORGANISM: Human
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359 ctctcccggc cgagccgcgg cggcagcagc agcagcagca gcagcaggag gaggagcccg     180
361 gtggcggcgg tggccgggga gcccatggcg tacagtcaag gaggcggcaa aaaaaaagtc     240
363 tgctactact acgacggtga tattggaaat tattattatg gacagggtca tcccatgaag     300
365 cctcatagaa tccgcatgac ccataacttg ctgttaaatt atggcttaca cagaaaaatg     360
367 gaaatatata ggccccataa agccactgcc gaagaaatga caaaatatca cagtgatgag     420
369 tatatcaaat ttctacggtc aataagacca gataacatgt ctgagtatag taagcagatg     480
371 catatattta atgttggaga agattgtcca gcgtttgatg gactctttga gttttgtcag     540
373 ctctcaactg gcggttcagt tgctggagct gtgaagttaa accgacaaca gactgatatg     600
375 gctgttaatt gggctggagg attacatcat gctaagaaat acgaagcatc aggatcctgt     660
377 tacgttaatg atattgtgct tgccatcctt gaattactaa agtatcatca gagagtctta     720
379 tatatcgata tagatattca tcatggtgat ggtgtcgaag aagcttttta tacaacagat     780
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RAW SEQUENCE LISTING   DATE: 08/16/2001
PATENT APPLICATION: US/09/817,913   TIME: 13:08:27

Input Set : A:\106101-145.ST25.txt
Output Set: N:\CRF3\08162001\I817913.raw

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385 atagacgatg agtcatatgg gcagatattt aagcctatta tctcaaaggt gatggagatg   960
387 tatcaaccta gtgctgtggt attacagtgt ggtgcagact cattatctgg tgatagactg  1020
389 ggttgtttca atctaacagt caaaggtcat gctaaatgtg tagaagttgt aaaaactttt  1080
391 aacttaccat tactgatgct tggaggaggt ggctacacaa tccgtaatgt tgctcgatgt  1140
393 tggacatatg agactgcagt tgcccttgat tgtgagattc ccaacgagtt gccatataat  1200
395 gattactttg agtattttgg accagacttc aaactgcata ttagtccttc aaacatgaca  1260
397 aaccagaaca ctccagaata tacggaaaag ataaaacagc gtttgtttga aaatttgcgc  1320
399 atgttacctc atgcacctgg tgtccagatg caagctattc agaagatgc tgttcatgaa   1380
401 gacagtggag atgaagatgg agaagatcca gacaagagaa tttctattcg agcatcagac  1440
403 aagcggatag cttgtgatga agaattctca gattctgagg atgaaggaga aggaggtcga  1500
405 agaaatgtgg ctgatcataa gaaaggagca agaaagcta gaattgaaga agataagaaa   1560
407 gaaacagagg acaaaaaaac agacgttaag gaagaagata aatccaagga caacagtggt  1620
409 gaaaaaacag ataccaaagg aaccaaatca gaacagctca gcaacccctg aatctgacag  1680
411 tctcaccaat ttcagaaaat cattaaaaag aaaatattga aggaaaatg ttttcttttt   1740
413 gaagacttct ggcttcattt tatactactt tggcatggac tgtatttatt ttcaaatggg  1800
415 acttttttcgt ttttgttttt ctgggcaagt tttattgtga gattttctaa ttatgaagca  1860
417 aaatttcttt tctccaccat gctttatgtg atagtatttta aaattgatgt gagttattat  1920
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427 <212> TYPE: PRT
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437             20                  25                  30
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441         35                  40                  45
444 Lys Pro Tyr Gln Ala Ser Gln His Asp Met Cys Arg Phe His Ser Glu
445     50                  55                  60
448 Asp Tyr Ile Asp Phe Leu Gln Arg Val Ser Pro Thr Asn Met Gln Gly
449 65                  70                  75                  80
452 Phe Thr Lys Ser Leu Asn Ala Pro Asn Val Gly Asp Asp Cys Pro Val
453             85                  90                  95
456 Phe Pro Gly Leu Phe Glu Phe Cys Ser Arg Tyr Thr Gly Ala Ser Leu
457             100                 105                 110
460 Gln Gly Ala Thr Gln Leu Asn Asn Lys Ile Cys Asp Ile Ala Asn Trp
461         115                 120                 125
464 Ala Gly Gly Leu His His Ala Lys Lys Phe Glu Ala Ser Gly Phe Cys
465     130                 135                 140
468 Tyr Val Asn Asp Ile Val Ile Gly Ile Leu Glu Leu Leu Leu Lys Tyr
469 145                 150                 155                 160
472 His Pro Arg Val Leu Tyr Ile Asp Ile Asp Ile His His Gly Asp Gly
473             165                 170                 175
476 Val Gln Glu Ala Phe Tyr Leu Thr Asp Arg Val Met Thr Val Ser Phe
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Use of n and / or Xaa has been detected in the
Sequence Listing. Review the Sequence Listing
to ensure a corresponding explanation is present
in the <220> to <223> fields of each sequence
using n or Xaa.

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/817,913   DATE: 08/16/2001
                                            TIME: 13:08:28

Input Set : A:\106101-145.ST25.txt
Output Set: N:\CRF3\08162001\I817913.raw

L:2337 M:283 W: Missing Blank Line separator, <220> field identifier
L:2398 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16
L:2400 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16